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Gloeckner
Chrysanthemum
Manual

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War Time Facts about Chrysanthemum Cuttings

War conditions have forced a reduction in the propagation of Chrysanthemum cuttings. If you purchased Yoder Brothers cuttings in 1943, **NO MATTER FROM WHOM**, you are entitled to order a similar number from us with the following regulations set forth by Yoder Brothers.

"We regret to announce that conditions this year make it impossible for us to accept orders for Chrysanthemum cuttings from new customers. Our entire 1943-44 production is offered to the purchasers of cuttings in the year 1942-43, and out of consideration to all, distribution will be among them in proportion to their receipts last year.

Whoever purchased cuttings last year is entitled to an equal number this year provided he can accept at least one-third of them in unrooted cuttings. If he wishes only rooted cuttings, he is entitled to two-thirds of the number purchased last year."

To further aid you in growing better Chrysanthemums we have included various cultural pointers. It is just a part of the *Gloeckner* service to keep you advised.

For important information on pot plant culture, shading and delayed flowering see pages 22 to 31.

SCHEDULE OF RATES

Fifty of a variety is the minimum that can be supplied; orders for more than 50 of a variety must be in multiples of 50.

The price per 100 and per 1000 for rooted cuttings appears opposite each variety in the catalogue. Unrooted cuttings will be available at \$10.00 per 1000 less than rooted cuttings.

If order totals 1000 or more, all items will take the 1000 rate. If order totals less than 1000, all items less than 250 will be billed at the 100 rate; 250 or more of a variety always take the 1000 rate.

Additions to orders or additional orders for the same customer will be considered a separate order and have no effect on the price of the original order.



SOIL

Chrysanthemums will grow well in a wide range of soil types but a fibrous silt loam is preferred. Blue grass sod to which rotted manure has been added plus an application of super phosphate has given excellent results. A soil that does not remain too open is preferred for this crop.

Many growers plant chrysanthemums in old soil without sterilizing and expect good results. Many diseases and too much fertility are often found in old soil. Verticillium wilt (Seidewitz disease) is carried over in the old soil. If cultured cuttings are planted into old soil many varieties will become affected with wilt. The only reliable method is to sterilize with steam so that the soil is heated to 180 to 200 degrees F. for at least one hour. If the soil is high in nitrate nitrogen we suggest you apply two inches of alfalfa or red clover hay into the soil in place of manure before sterilizing. This coarse fiber will reduce the nitrates and also adds humus to the soil. After sterilizing leach the soil with large quantities of water to reduce the available nutrients.

Where steam sterilization is not available such as in cloth houses we suggest that you sterilize with formaldehyde liquid. Dilute one gallon of formaldehyde to 50 gallons of water and add this solution at the rate of 1/2 gallon per square foot of bed area. Allow the fumes to leave the soil before planting. Soil should be well tilled before applying liquid.

Still another chemical which has proven its worth is Larvacide. This material must be used when the greenhouses are empty to avoid injury to adjoining crops. This gas is applied in liquid form with a special applicator so that 2 to 3 c. c. are applied at 10 inch centers. The soil should be moist before applying. A good suitable covering should be placed over the treated soil to keep the gas in the soil for at least 48 hours, although a water seal applied 2 to 3 times every 24 hours will suffice. The soil temperature should be at least 60 degrees or higher. When used properly you can expect favorable control of insects, diseases and weed seeds.

Evidence shows that the soil reaction should be slightly acid pH 6.5, although in many instances a neutral medium does very well. If your soil tests slightly alkaline apply 1/2 to one pound of agricultural sulfur per 100 square feet of area. However, if your soil is acid apply 3 to 5 pounds of agricultural ground limestone per 100 square feet of area.

Proper drainage and proper aeration of the soil are very vital to good growth. Many times improper drainage of the bench or bed is the reason for a poor crop. No wet spots should ever be present. Soil drainage may be improved by the addition of various materials. Any coarse organic material such as manure, alfalfa hay or clover hay applied at the rate not to exceed one fourth the volume will separate the soil particles sufficiently to increase pore space. Heavy applications of sand to a soil have not always proven of value to a chrysanthemum crop. Aeration may also be increased by proper cultivation of the soil. Frequent scratchings are recommended during the early growth of the crop.



Thrip Injury

*Mite Injury Plant on Left Normal,
Right Infected*



Cultural Pointers

FERTILIZER

When using fresh soil, apply 3 to 5 lbs. of super phosphate per 100 square feet of area plus a liberal application of manure before planting. Phosphorus moves slowly within the soil mixture. It should always be added before the crop is benched so that it may be mixed thoroughly into the soil. A mulch of peat, rotted manure, alfalfa or red clover hay applied two to three weeks after planting is helpful. Six weeks after planting and every three weeks until color shows an application of ammonium sulfate at the rate of 1 lb. per 100 square feet of area or 2 lbs. of a complete fertilizer, such as Electra, is advisable. Remember that the plant is the best guide as to fertilizer requirements.

In the cooler weather and shorter days of September, omit the ammonium sulfate if the plants are growing freely and are of good color. The chrysanthemum plant assimilates more phosphorus and potassium during the fall when temperatures decline. Therefore, it is more desirable to apply a complete fertilizer shortly after the buds are visible.

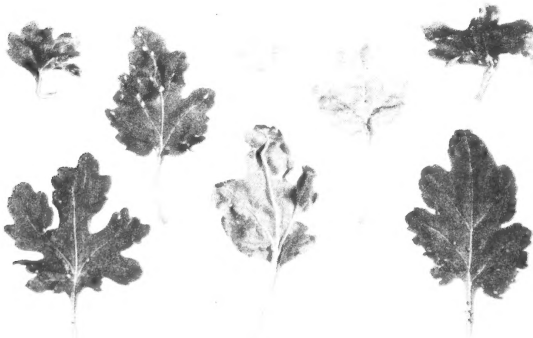
When using sterilized soil the best recommendations to follow would be to analyze your soil from time to time. We have found that when the following nutrient levels are kept, good crops are the result. Nitrate nitrogen should be between 10 to 25 parts per million; phosphorus from 2 to 5 parts per million and potassium 20 to 40 parts per million.

The foregoing pertains to plants that appear and behave normally. If plants are stunted, look yellow and sick, they are probably suffering from an extremely rich soil. Many greenhouse soils are excessively rich and chrysanthemums will not thrive in such a medium. If this is the case, the remedy is leaching with water. Lots and lots of it. More water than you ever applied to a bench at once before, two or three gallons per square foot. The water that runs through the soil carries with it the excessive plant food and allows your plants to recover from their indigestion. Did you ever notice fine healthy growth on a small part of a sick-looking bed of mums, and observe that it was under a broken pane of glass that allowed the rain water to come through and leach the soil below? Such a sight is a sure indication that the soil needed leaching. In most cases this condition is the result of the foolish and indiscriminate use of fertilizers. Use them when needed, but use them judiciously. Remember fertilizers are plant food in an extremely concentrated form.

PLANTING

Under shading information we have added the date of benching and you will note that we suggest planting in May and June depending on the date you wish to shade. The reason for earlier planting is to allow the plant enough time to grow so that the stem length is sufficient when blooms are ready to cut. For normal culture it is our experience that too late a planting, such as in late July or August, does not pay. We would like to see all planting done in the month of June.

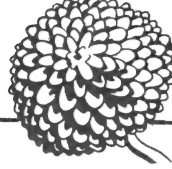
Many florists are planting rooted cuttings directly into permanent locations. This not only reduces several handlings and production costs, but also produces a better quality bloom. We fully realize that it is often an impossibility for all to treat their chrysanthemums this way. However, we have found that young, soft plants are superior to hard woody plants. We do not recommend the plant-



Midge Showing Typical Galls on Foliage



Symphidid Enlarged 10x



Cultural Pointers

PLANTING — Continued

ing of unrooted cuttings directly into the permanent locations as you may encounter a heavy loss. However, we suggest you try a small number as a trial.

For good quality pompons we prefer to plant 7x8 inches or 8x8 inches pinched once, and thin the shoots to three per plant. Nothing is gained by planting at a closer distance. Light intensity should be high at the base of the plant for quality blooms and if planted too close we have lost the factor which promotes quality. Large flowered varieties are generally planted 8x8 inches or 8x9 inches, this also applies to disbud anemone and single varieties.

PINCHING

Pinching not only regulates the number of stems but also influences the petallage of varieties that tend to be single; regulates the neckiness eliminates the appearance of crown buds; and regulates the spray formation on pompons or singles.

For high quality pompons we suggest that you plant in June and give one pinch on the date listed in our list of varieties under "Last Pinch", and allow 3 to 4 breaks to mature. If you follow this culture your sprays will be much larger and every one will be saleable. If you prefer to have a number of smaller sprays, with fewer blooms open at one time, follow the double pinching procedure.

When pinching only remove the soft growth, never cut into the woody stems as this will not produce the type of breaks you desire. In all cases it is better to have at least eight inches of growth on the plants before pinching. It is our experience not to pinch until the plant has become well established in its permanent location.

Standards are usually grown with two blooms per plant. Here again we suggest that you follow the dates given after each variety. Singles and anemones are usually grown to 3 to 4 stems per plant.

The last pinching dates given after each variety will help you grow that variety to excellency. Remember that pinching is just one cultural factor and will only function when all other cultural points are carried out properly.

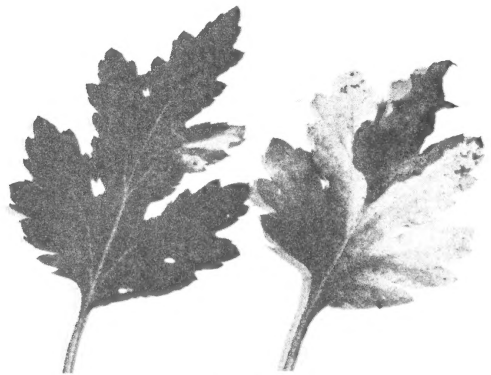
WATERING

When planting rooted cuttings directly into their permanent locations it is essential to water thoroughly to set the soil around the plant roots. We suggest double watering again when the soil gets on the dry side. By this time the plants are established and regular watering should be followed. Keep humidity in the house by wetting down bench and walks.

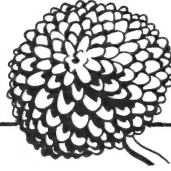
The knowledge of proper watering is essential to success. Chrysanthemums produce extremely heavy foliage and a great deal of water is required at the roots, and under ordinary conditions of bench culture overwatering would be difficult. When grown in beds more care should be exercised in watering.



Stunted Top Caused by Sting of Tarnish Plant Bug



Septoria Leaf Spot



*Crown bud surrounded
by lateral buds*

Terminal bud surrounded by flower buds

Terminal bud selected

DISBUDDING

Large flowered varieties produce side shoots in the axils of the leaves which should be removed very close to the base at regular weekly intervals.

The chrysanthemum usually produces two distinct types of flowering buds—Crown and Terminal. The first bud produced is called the crown bud and is distinguished by being surrounded by other lateral leaf buds. The second is the terminal bud and is surrounded by several flower buds. If the plant is planted especially early, a second crown bud might appear. In appearance this second crown bud is exactly the same as the first.

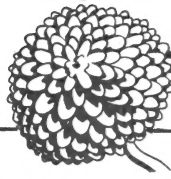
The procedure of "Taking Bud" depends very largely on the variety. Usually the safest rule to follow is not to select a bud of early or midseason varieties before August 25. In our list of large flowered varieties under "Select Bud" you will find the date on which to select the proper bud. If bud is selected too early a large percentage of the flowers will be crippled.

The final selection of bud should not be made when the cluster buds are too small as this will very likely cause injury to the stem near the bloom. Likewise it is not advisable to delay selecting the bud too long. Some growers like to leave an alternate bud until they are certain that nothing will happen to the one finally selected.

TEMPERATURE

Our leading floriculturalists have shown that if chrysanthemums are grown in temperatures much below 50 degrees at the time of bud initiation the plants will remain vegetative and will not form buds.

Blindness in this crop is usually associated with those varieties which flower the latter part of November or later. Not all varieties initiate buds at the same date. The late flowering varieties may not set bud until October. The average night temperature at that date may well be below 50 degrees. It is recommended that you keep a night temperature of 55 degrees on the late varieties until the buds are visible, after that you are safe in reducing the temperature to 48 to 50 degrees. This raise in temperature is especially important if you are using additional light to retard blooming.



Cultured Stock

WHAT IS VERTICILLIUM WILT?

Verticillium wilt or more commonly called Seidewitz Disease, causes the margins of the leaves to turn yellow and eventually wilt or dry up. This begins at the base of the plant and works up the stem. It may affect one side of a stem or plant more than the other. There are no distinct spots on the leaves. Some varieties are more resistant than others.

HOW IS VERTICILLIUM WILT SPREAD?

Verticillium infection is either transmitted through diseased cuttings or is picked up by root infection from Verticillium-infected soil—it is not transmitted by air-borne or splashed spores.

WHAT IS THE CONTROL?

Plant only disease free, cultured cuttings in soil which has been steam sterilized.

WHAT IS CULTURING?

If bits of infected tissue of a cutting were partially imbedded in the gelatine-like agar medium which is used for growing fungi, the Verticillium grows out into the surrounding agar and can be accurately identified. If the tissue were not infected, no growth of Verticillium develops. Thus, the presence or absence of Verticillium in the basal tissues of any shoot can be rather quickly determined, the entire process requires only 10 days. It is this process which is referred to as "Culturing."

WHAT IS CULTURED-STOCK?

Each cutting is carefully cultured or indexed to determine the presence or absence of Verticillium organism. All Verticillium free cuttings are rooted in sterilized sand and then grown in sterilized soil. Stock plants are grown from this healthy stock in sterilized soil. This is "Cultured Stock."

IS THIS CULTURED-STOCK IMMUNE TO VERTICILLIUM WILT?

If planted in properly sterilized soil it should remain free or nearly free of Verticillium, but if planted into old, contaminated soil, cultured stock will become infected and may appear a little better than the usual run of stock.

ARE ALL VARIETIES GROWN FROM CULTURED STOCK?

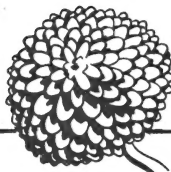
Every cutting that you receive from us has been grown from cultured stock.



Verticillium Wilt

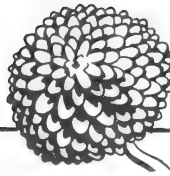


Rust on Chrysanthemum



Diseases and Their Control

DISEASE	SYMPTOMS	CONTROL
FOLIAR NEMATODE (See Picture on Page 17)	Leaves first turn black or chocolate brown and leathery, then shrivel up, become brittle. Begins at base of stem and may work up to the flowers.	Strip off all the leaves from the lower 6 to 8 inches of all plants as soon as possible. Spray with double strength nicofume plus Bordeaux Mixture.
MILDEW (See Picture on Page 17)	Whitish powdery growth on upper surface of leaves.	Spray at regular weekly intervals with a good wettable sulfur, 1 lb. per 100 gallons of water to which a good commercial spreader has been added. Dusting with a good dusting sulfur will give equally good results.
ROOT KNOT NEMATODE (Eelworm)	The nematodes or eelworms bore into the roots of the plants and cause knots or galls to develop on the root systems. As a result the plants are weak, yellowish and stunted in growth.	Soil sterilization, preferably with steam, is very effective in eliminating the root knot nematodes from the soil.
ROOT ROT	Entire plant will wilt and recover during the evening. Foliage turns yellow, entire plant will die in a very short time. A number of soil born organisms cause the loss of the roots.	Do not plant any cuttings that have been infected with damping off. Use sterilized soil. Remove all affected plants when noticed.
RUST (See Picture on Page 5)	Chocolate brown powdery pustules on the lower surface of the leaves.	Same as for Mildew.
SEPTORIA LEAF SPOT (Leaf Blight) (See Picture on Page 3)	Distinct circular spots on the leaves. These are greyish brown in color and become brittle in the center. Affected leaves may turn yellow and die. More prevalent out of doors. Some varieties are more susceptible than others. Sea Gull is very susceptible.	Spray with 2-2-50 Bordeaux Mixture plus a good commercial spreader about 3 or 4 days after planting and continue at regular weekly intervals until about the middle of July. Fermate, 1 lb. per 100 gals. with Du-Pont Spreader-Sticker at 1-3000, has given remarkable control, being equal, if not superior, to Bordeaux Mixture.
VERTICILLIUM WILT (Seidewitz Disease) (See Picture on Page 5)	Margins of leaves turn yellow and eventually wilt or dry up. This begins at base of plant and works up the stems. May affect one side of a stem or plant more than the other. No distinct spots. Varieties vary in resistance to this disease.	Plant only disease free cultured cuttings in soil which has been steam sterilized.



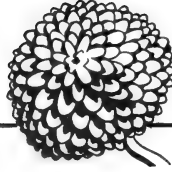
Insects and Their Control

INSECT	CONTROL	REMARKS
APHID (Plant Lice)	Nicofume Liquid, 1-400. Nicofume Fumigation.	Use pressure fumigators.
CLIMBING CUT WORM	Arsenate of lead spray or dust.	1½ lbs. to 50 gal. water plus ½ lb. caseinate spreader.
	Poison bran bait.	Poison Bait Formula: Wheat bran 5 lbs. Enough water to moisten mash. Paris Green 4 ozs. Molasses 1 pint. One finely chopped lemon.
LACE BUG	Tobacco dust.	General Sanitation.
LEAF ROLLER (Leaf Tier)	Arsenate of lead spray when plants are young.	1½ lbs. to 50 gal. water plus ½ lb. caseinate spreader.
	Tartar Emetic.	2 lbs. Tartar Emetic 4 lbs. Brown Sugar. 50 gal. water.
MEALY BUG	Calcium cyanide fumigation.	With caution.
	Greenhouse Volck 1-50, and Nicofume 1-400.	Be very careful, will burn when temperature is high.
	Loro 1-800, Grasselli Spreader 1-1200.	With caution.
MIDGE (See Picture on Page 2)	Calcium Cyanide fumigation. Nicofume fumigation.	Must be done every evening for 21 days.
	Loro 1-800, Grasselli Spreader 1-1200.	With caution. Spray every 3 days for 3 weeks then every week.
MITE (See Picture on Page 1)	Tobacco dust.	Must be applied frequently.
	Thiocide 1-200, Grasselli Spreader 1-800. Nicotine liquid, 1-400, plus spreader.	
RED SPIDER	Syringe with water. Loro 1-800, Grasselli Spreader 1-1200. Selocide 1-100.	With caution.
SYMPHILLID (1) (See Picture on Page 2)	Grow on raised benches.	Steam sterilize all soil.
TARNISH PLANT BUG (2)	General Sanitation. Nicofume fumigation.	Control by contact only.
	Tartar Emetic.	2 lb. Tartar emetic. 4 lbs. Brown sugar. 50 gal. of water. Mix tartar emetic in warm water the night before using.
THRIP (See Picture on Page 1)	Nicofume liquid 1-400. Loro 1-800, plus spreader.	Will cause injury on some Varieties.

(1) Symphillids are small white creatures about 1/8 to 3/16 inches long which feed on the small white roots. Plants affected will not grow to any height.

(2) Tarnish plant bugs in severe cases will cause blindness. Often times the flowers are one sided and the top of the spray will tip to one side. This insect is about 1/4 inch long and very difficult to locate. This insect is very injurious to mums planted out of doors without any aster cloth protection.

Gloeckner



Soil Sterilization with Steam

Today we are more than ever interested in economical operations. Sterilizing soil is definitely a money and labor saving method in preparing soils. There are other methods used to sterilize soil but we feel that steam is the most practical.

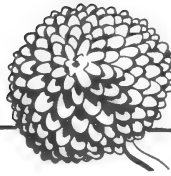
Soil sterilization is a protection against certain soil borne diseases, such as Verticillium wilt (Seidewitz disease) and root nematodes. Sterilizing by steam changes the physical properties by making the soil granular.

If the soil is high in nitrate, we suggest you apply two inches of alfalfa or red clover hay into the soil in place of manure, before sterilizing. Old greenhouse soils used for many years are usually high in nitrate nitrogen and are benefited by leaching, after the soil is steamed.

USEFUL HINTS

- 1—Apply manure or red clover hay before sterilizing. Till the soil thoroughly, so that the steam may be uniformly distributed.
- 2—Have the soil moderately moist, slightly drier than a good potting soil.
- 3—Use three inch tile, down spouting or pipe; two lines in a three and one-half foot bench. Ridge the soil to the center of the bench directly over the lines, covering with tarpaulin, canvas or builders' felt.
- 4—High pressure steam is not necessary. Figure that you can sterilize approximately one square yard of soil per boiler horse power.
- 5—Do not try to sterilize more than 50 feet of bench in one direction. The longer the distance, the longer time required to heat the desired temperature.
- 6—Suitable thermometers should be available for determining temperatures at various depths.
- 7—Cover the sides of the benches so that the entire bench and contents are heated to 180°F.
- 8—No air should enter the pipe or tile with the steam as cold air causes condensation of the steam.
- 9—Remove the covering one hour after the steam has been cut. This allows the excess moisture to pass from the soil as vapor.
- 10—Steam sterilization granulates the soil particles, making for a more porous soil, allowing air and moisture to pass through freely.
- 11—Steam sterilization usually will increase the soluble salts, nitrate nitrogen and ammonia nitrogen over a period of several weeks, although this is not always the case.
- 12—Leach heavily immediately after sterilizing to reduce excess fertility
- 13—Be very careful so as not to contaminate sterilized soils by placing tools, flats, etc., on sterilized soil.
- 14—The cost of steam sterilization will average 1-1/2 cents per square foot of bench area, as compared with 5 cents per square foot when soil is changed.

We will at all times endeavor to serve you to the very best of our ability. If you have any questions, cultural problems, etc., from time to time, please feel free to call upon us. If we are able to help you we shall be more than repaid.

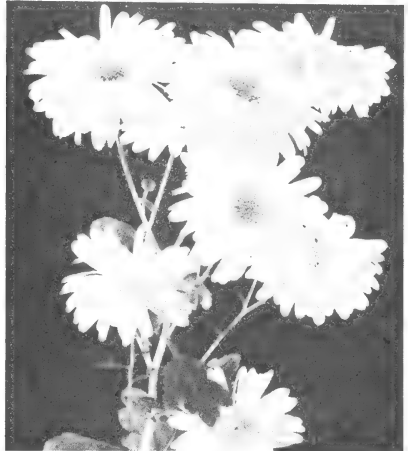


Novelty Chrysanthemums

SYLVANNA

A medium size orange bronze single with outstanding brilliance that does not fade or go dull even when flower is past maturity. Its blooming date is November 10. The flower is of good substance and has excellent keeping qualities. This is a variety of free growth habit, and is not at all sensitive to cultural environment. It produces satisfactorily on either raised benches or ground beds. Its response to black cloth is excellent. A quality single that is easy to grow.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000



Sylvanna

ARGO

Late large pompon with good rounded form and excellent substance. Color beautiful bronzy orange, shading to rust. A very appealing shade, which does not fade if allowed to stand on the plant. Growth habit somewhat dwarf and rigid. Seems to make its growth late in the season and should therefore not be planted late. Stem and foliage are excellent. Production is likewise excellent if planted early. Blooms normally the first week in December. Argo is a quality pompon with a very appealing color which sells on sight.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000

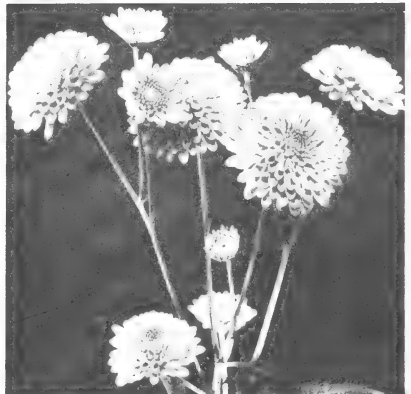


Argo

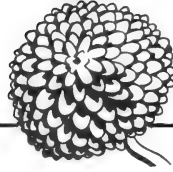
MINUET

A beautifully formed, clear pink pompon of medium size that blooms for Thanksgiving. It is of extremely easy culture; the habit being vigorous and free, with dark glossy foliage, strong stems and upright sprays. This seedling bunches, keeps, and ships unusually well. It is a reliable producer and responds well under a wide diversity of cultures. It blooms at a period when a lively pink of top quality is in great demand.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000



Minuet



Novelty Chrysanthemums

NANCY CRAIN

Good button types are needed to supply the increasing demand for dainty and artistic work. Nancy Crain is a large white button which possesses perfect form and excellent substance. Has excellent growth habit producing clean and strong well flowered sprays with very high production. Matures about the 5th of November. This variety is easy to grow and should prove a favorite for early November.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000

NEVADA

Pure white anemone suitable for growing in natural sprays. Possesses excellent substance with a compactly formed cushion. Good growth habit and production. Blooms normally the end of November into December. A desirable and useful anemone producing flowers of high quality at a season when this type and color is much in demand.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000

LODESTAR

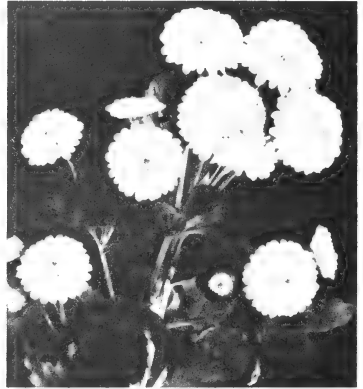
An intense lemon yellow single that blooms for Thanksgiving. This single, medium in size, has a very attractive star-like form. The substance and keeping quality improves any existing yellow single of similar flowering date. The color does not fade or lose brilliance with maturity. The small dark green foliage is carried on rigid stems of medium size. Lodestar should provide for Thanksgiving a much needed color in a very aristocratic form.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000

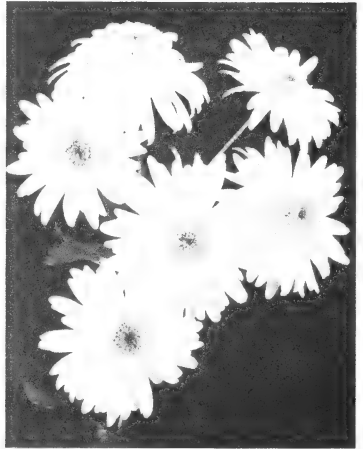
BRONZE GOLDSMITH

A beautifully blended orange and Brazil red sport from Goldsmith.

Price for Rooted Cuttings:
\$15.00 per 100; \$125.00 per 1000



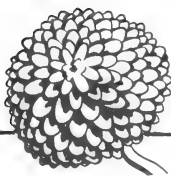
Nancy Crain



Nevada



Lodestar



Novelty Chrysanthemums

Sold on Contract Basis

REVELATION

A clear white medium size pompon for early January. The flower is of good form and substance, larger and more fully double than Snow. The type of growth of this variety is truly a revelation for this late flowering season. The small hard stems are extremely rigid, with attractive dark green and healthy foliage. It is not at all sensitive to cultural environment, possessing a persistence of habit that should make it one of the most valuable pompons in existence.

Price for Rooted Cuttings:

\$5.00 per 100; \$45.00 per 1000



Revelation

SUNNYSIDE

This seedling should mark a new epoch for pompons. The quality will thrill the most discriminating retail artist. The production and ease of culture should excite the critical eye of the grower. Sunnyside is a small golden yellow pompon of very hard substance, on sprays of unsurpassed rigidity. It matures November 20 to 25 to be had for Thanksgiving. Unhesitatingly we recommend Sunnyside as a distinct advance and a new era in the field of high quality, productive pompons.

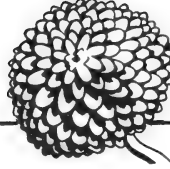
Price for Rooted Cuttings:

\$5.00 per 100; \$45.00 per 1000



Sunnyside

NOTE: All cuttings of these varieties will be sold with the following restrictions: Purchaser may grow them for flower production only; propagation rights are reserved and stock must be discarded after the flowering season. Contract forms will be supplied by the originator and must be signed and returned before shipments are made.



Novelty Chrysanthemums

NEW VARIETIES OF A FEW YEARS AGO. DON'T FAIL TO ADD THESE TO YOUR LIST.

INDIANAPOLIS YELLOW

This lemon yellow sport from Indianapolis Pink is another valuable addition to the very popular Indianapolis family. We think this is the best yellow mum for its specific flowering date.

GOLDEN SURPRISE

A bright sulphur yellow pompon shading to golden yellow. Blooms on well formed sprays with rigid pedicils. The variety is of extremely easy culture, and possesses excellent glossy green foliage which is disease resistant. Will give very good production of attractive blooms having good form and substance. Matures November 20th to 25th when yellow pompons are in great demand.

PIXIE

Pixie is a large, well rounded button pompon, 1½ inches in diameter. Its color is deep golden yellow. The normal blooming date is November 10th. Pixie has proven very valuable for early shading. Substance is outstandingly good, making the shipping and keeping qualities excellent. The plant is productive; the flowers are produced on stiff, wiry stems with good spray formations.

Above Varieties Price for Rooted Cuttings:—\$8.00 per 100, \$75.00 per 1000

YELLOW SNOW

A bright Pernet yellow sport from Snow. The form and growth habit are identical with the original. Because of its season, December 30th, heavy production and excellent color this variety will prove to be one of the most valuable additions to the late pompons.

Above Varieties Price for Rooted Cuttings:—\$5.00 per 100, \$45.00 per 1000

YELLOW HAMMER

Bright golden yellow pompon blooming October 20. Blooms size of Pink Dot. Medium height and produces heavily, making good sprays. Recommended for shading.

Above Varieties Price for Rooted Cuttings:—\$12.00 per 100, \$100.00 per 1000

ANACONDA

A large flowered commercial incurved possessing excellent substance and color. Flowers do not shatter nor bruise easily from shipping or handling. The color is coppery red with golden bronze reverse, a shade very similar to the old variety Mrs. David Roy. Date of maturity November 10th to November 15th.

SPUN GOLD

This variety has been on trial for several years under extensive plantings. It ranks among the highest producing pompons we know of. Spun Gold is a large decorative pompon; deep lemon yellow in color: It blooms December 15th and later. Because of good substance it ships and keeps well. The stem is medium and strong. The flowers are well spaced on rigid sprays.

NAVAHO

Designed for a cloth house, medium, decorative, red pompon. It blooms normally November 5th. Color is deep crimson; reddish bronze under early shading. Responds well to shading and fills a great need for a cloth house variety in its color range. Growth is strong and uniform. The 2½ inch flowers are well spaced on fine sprays.

CAMEO

An ivory pompon of unusual size and substance that blooms the same time as Yuletide, Cordova and Silver Star. A strong persistent grower possessing a rigid and dwell spread spray. The growth habit is superior to any worth while variety in its color class and blooming season. Matures December 5th.

PRISCILLA

Late white Pompon blooming November 28th. The flowers are 2 inches in diameter, ball-shaped and clear white. Heavy producer. A much needed late white Pompon.



Large Flowering Varieties

YELLOW

Name and Description	Last Pinch	Height	Select Bud	Matures	Price per	
					100	1000
Gold Lode. Light golden yellow. Reflexed	June 20	Med.	Aug. 25	Oct. 1	\$4.00	\$35.00
Celestra. Lemon yellow. Incurved	June 25	Med.	Ter. Bud	Oct. 15	4.00	35.00
Mrs. H. E. Kidder. Deep lemon yellow. Incurved	June 30	Med.	Aug. 25	Oct. 20	4.00	35.00
Yellow Ambassador. Pale lemon yellow. Incurved. Sport from Ambassador	July 5	Med.	Ter. Bud	Oct. 23	4.00	35.00
Blazing Gold. Deep golden yellow. Incurved	July 5	Med.	Ter. Bud	Oct. 25	4.00	35.00
Sunglow. Golden yellow. Incurved	July 5	Med.	Aug. 25	Oct. 25	4.00	35.00
Citronella. Light buff yellow. Incurved	July 5	Short	Aug. 31	Oct. 28	4.00	35.00
Yellow Albatross. Light lemon yellow. Incurved. Sport from Albatross	July 10	Med.	Ter. Bud	Oct. 28	15.00	125.00
Saratoga. Bright golden yellow. Incurved	July 10	Med.	Ter. Bud	Nov. 1	4.00	35.00
Golden Glory. Golden yellow. Semi-incurved	July 10	Short	Aug. 25	Nov. 1	4.00	35.00
Good News. Deep lemon yellow. Incurved. Sport from Detroit News	July 10	Med.	Aug. 30	Nov. 1	4.00	35.00
Indianapolis Yellow. Lemon yellow. Incurved. Sport from Indianapolis Pink	July 15	Med.	Ter. Bud	Nov. 8	8.00	75.00
Cardonia. Deep golden yellow. Incurved	July 15	Med.	Sept. 5	Nov. 10	4.00	35.00
Penrod. Golden yellow. Incurved	July 15	Med.	Ter. Bud	Nov. 10	6.00	55.00
Whittier. Lemon yellow. Incurved	July 15	Med.	Sept. 15	Nov. 13	4.00	35.00
Yellow Monument. Pale lemon yellow. Incurved. Sport from Monument	July 20	Med.	Sept. 10	Nov. 15	4.00	35.00
Honey Dew. Lemon yellow. Incurved	July 20	Short	Ter. Bud	Nov. 15	4.00	35.00
Yellow Mefo. Lemon yellow. Incurved	July 25	Med.	Sept. 20	Nov. 20	4.00	35.00
Friendly Call. Buff yellow. Incurved	July 25	Tall	Ter. Bud	Nov. 20	4.00	35.00
Friendly Rival. Deep chrome yellow. Incurved	July 25	Med.	Sept. 10	Nov. 20	4.00	35.00
Marie DePetris. Deep golden yellow. Incurved	July 25	Short	Sept. 15	Nov. 23	4.00	35.00
Sun Gold. Lemon yellow. Semi-incurved	July 25	Med.	Sept. 30	Nov. 25	4.00	35.00
Golden Pearson. (Leroy Zang). Light golden yellow. Incurved. Sport from Gladys's Pearson	July 25	Med.	Sept. 30	Nov. 25	4.00	35.00
Improved Yellow Chattanooga. Light lemon yellow. Incurved	July 25	Med.	Sept. 20	Nov. 25	4.00	35.00
R. M. Calkins. Golden yellow. Semi-incurved	July 30	Med.	Sept. 20	Nov. 30	4.00	35.00
Golden Mrs. Ross. Golden yellow. Incurved	July 30	Tall	Ter. Bud	Dec. 3	4.00	35.00
Golden Mistletoe. Pale golden yellow. Incurved	Aug. 4	Med.	Sept. 30	Dec. 10	4.00	35.00
Meteore. Lemon yellow. Incurved	Aug. 4	Med.	Ter. Bud	Dec. 10	6.00	50.00
Improved Tobin's Late Yellow. Deep lemon yellow. Semi-incurved. Sport from Tobin's Late Yellow	Aug. 10	Short	Sept. 30	Dec. 15	4.00	35.00

WHITE

Smith's Early White. Incurved	June 20	Tall	Aug. 10	Oct. 5	4.00	35.00
Quaker Maid. White, tinged with pink. Reflexed	June 25	Med.	Aug. 25	Oct. 15	4.00	35.00
Silver Sheen. Incurved	June 30	Med.	Aug. 30	Oct. 18	4.00	35.00
Ambassador. Cream white. Incurved	July 5	Med.	Ter. Bud	Oct. 23	4.00	35.00
Albatross. Incurved	July 10	Med.	Ter. Bud	Oct. 28	4.00	35.00
Snow White. Incurved	July 10	Med.	Ter. Bud	Nov. 1	4.00	35.00

FOR SHADING INFORMATION AND DELAYED FLOWERING SEE PAGES 22-29.



Large Flowering Varieties

WHITE—Continued

Name and Description	Last Pinch	Height	Select Bud	Matures	Price per	
					100	1000
Betsy Ross. Ivory White. Incurved.....	July 10	Tall	Aug. 25	Nov. 1	\$4.00	\$35.00
Indianapolis White. Incurved.....	July 15	Med.	Ter. Bud	Nov. 8	4.00	35.00
Monument. Ivory White. Incurved.....	July 20	Med.	Sept. 10	Nov. 15	4.00	35.00
Marketeer. Incurved.....	July 20	Med.	Ter. Bud	Nov. 18	4.00	35.00
Mefo. Ivory White. Incurved.....	July 25	Med.	Sept. 20	Nov. 20	4.00	35.00
White Frick. White suffused with pink. Incurved. Sport from Helen Frick.....	July 25	Short	Sept. 10	Nov. 25	4.00	35.00
Chattanooga. Incurved.....	July 25	Med.	Sept. 20	Nov. 25	4.00	35.00
December Glory. Ivory White. Incurved.....	July 30	Tall	Sept. 30	Dec. 1	4.00	35.00
December White. Incurved.....	Aug. 4	Med.	Ter. Bud	Dec. 5	12.00	100.00
White Mistletoe. Incurved.....	Aug. 4	Med.	Sept. 30	Dec. 10	4.00	35.00
Smith's Late White. Ivory white. Semi-incurved.	Aug. 10	Short	Sept. 30	Dec. 15	4.00	35.00

B R O N Z E

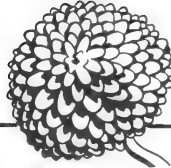
Indianola. Pale reddish bronze. Incurved.....	June 25	Med.	Aug. 25	Oct. 10	4.00	35.00
Hilda Bergen. Dark reddish bronze. Incurved..	July 5	Med.	Aug. 25	Oct. 25	4.00	35.00
Cambria. Golden bronze. Incurved.....	July 5	Med.	Ter. Bud	Oct. 25	6.00	55.00
Glitters. Deep reddish orange. Reflexed.....	July 5	Med.	Ter. Bud	Oct. 28	4.00	35.00
Apricot Queen. Orange bronze. Incurved.....	July 10	Short	Sept. 5	Nov. 1	4.00	35.00
Detroit News. Reddish bronze with buff reverse. Incurved.....	July 10	Med.	Aug. 30	Nov. 1	4.00	35.00
Indianapolis Bronze. Buff bronze. Incurved. Sport from Indianapolis Pink.....	July 15	Med.	Ter. Bud	Nov. 8	4.00	35.00
Gladys Pearson. Light buff bronze. Incurved..	July 25	Med.	Sept. 30	Nov. 25	4.00	35.00
Oak Leaf. Reddish bronze. Incurved.....	July 25	Med.	Sept. 30	Nov. 25	4.00	35.00
Bronze Mistletoe. Buff bronze suffused with pink. Incurved.....	Aug. 4	Med.	Sept. 30	Dec. 10	4.00	35.00

P I N K

Early October. Light lavender. Semi-incurved.	June 25	Med.	Ter. Bud	Oct. 10	12.00	100.00
Pink Chief. Lavender. Incurved.....	June 25	Tall	Ter. Bud	Oct. 15	4.00	35.00
Major Ed. Bowes. Deep lavender. Incurved...	June 30	Med.	Aug. 30	Oct. 20	4.00	35.00
Rosabella. Rose pink. Incurved.....	July 5	Med.	Ter. Bud	Oct. 25	4.00	35.00
J. W. Prince. (Improved Chieftain). Rose pink. Incurved.....	July 10	Short	Aug. 30	Nov. 5	4.00	35.00
Indianapolis Pink. Deep lavender with pale re- verse. Incurved.....	July 15	Med.	Ter. Bud	Nov. 8	4.00	35.00
Orchid Queen. Orchid pink. Incurved.....	July 15	Med.	Ter. Bud	Nov. 12	4.00	35.00
Thanksgiving Pink. Amaranth. Reflexed.....	July 25	Short	Sept. 15	Nov. 23	4.00	35.00
Helen Frick. Rose pink. Incurved.....	July 25	Short	Sept. 10	Nov. 25	4.00	35.00
Edwin Seidewitz. Lavender. Incurved.....	July 30	Tall	Sept. 15	Nov. 30	4.00	35.00
Pink Mistletoe. Lavender. Incurved.....	Aug. 4	Med.	Sept. 30	Dec. 10	4.00	35.00

R E D

Anaconda. Deep coppery red with golden bronze reverse. Incurved.....	July 15	Med.	Sept. 15	Nov. 10	8.00	75.00
Mrs. David F. Roy. Crimson with deep buff re- verse. Incurved.....	July 15	Short	Sept. 15	Nov. 10	4.00	35.00
Garnet King. Dark red. Reflexed.....	July 20	Med.	Sept. 20	Nov. 18	4.00	35.00



Pompon and Decorative Varieties

The term pompon is applied to those varieties which are of the true rounded type, and those very nearly approaching this type.

Decorative varieties are those which are a distinct departure from the rounded type. Their flowers are less compact, partly reflexed and display more of the color of the inner side of the petals.

Size of flower is indicated by S—small; Int.—intermediate; L—Large.

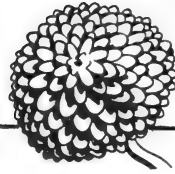
YELLOW

Name and Description	Last Pinch	Height	Size & Type	Matures	Price per	
					100	1000
Yellow Irene. Light lemon yellow. Sport from Irene	June 20	Short	S. Pom.	Oct. 18	\$4.00	\$35.00
Rodell Improved. Light lemon yellow	June 25	Short	Int. Pom.	Oct. 20	4.00	35.00
Yellow Hammer. Golden yellow	June 25	Med.	Int. Pom.	Oct. 20	12.00	100.00
Golden Spray. Deep lemon yellow	June 30	Med.	Int. Pom.	Oct. 23	4.00	35.00
*Golden Herald. Deep golden yellow	June 30	Med.	L. Dec.	Oct. 25	4.00	35.00
Yellow Dot. Yellow with bronze center. Sport from Pink Dot	June 30	Med.	Int. Pom.	Oct. 25	4.00	35.00
Yellow Arcadia. Pernet yellow	June 30	Med.	Int. Pom.	Oct. 28	4.00	35.00
Mary Lennon Hall. (Vera Victoria). Deep lemon yellow	July 5	Tall	Int. Pom.	Nov. 1	4.00	35.00
Yellow Sea Gull. Pale lemon yellow. Sport from Sea Gull	July 5	Tall	Int. Pom.	Nov. 1	4.00	35.00
*Yellow Doty. Buff Yellow	July 5	Med.	L. Pom.	Nov. 1	4.00	35.00
Nuggets. Light lemon yellow	July 5	Short	S. Pom.	Nov. 5	4.00	35.00
Yellow Bushnell. Pernet yellow. Sport from Rev. Bushnell	July 10	Tall	Int. Pom.	Nov. 8	4.00	35.00
Derigold. Deep golden yellow	July 10	Med.	Int. Pom.	Nov. 10	4.00	35.00
Pixie. Deep golden yellow	July 10	Med.	S. Pom.	Nov. 10	8.00	75.00
Yellow New York. Deep lemon yellow. Sport from New York	July 10	Med.	S. Pom.	Nov. 13	4.00	35.00
Yellow Fellow. Deep lemon yellow	July 15	Med.	Int. Dec.	Nov. 15	4.00	35.00
Golden Surprise. Sulphur yellow, shading to golden yellow	July 20	Med.	Int. Pom.	Nov. 20	8.00	75.00
Hasegawa Gold. Light golden yellow	July 20	Med.	Int. Pom.	Nov. 23	4.00	35.00
§Sunnyside. Golden yellow	July 25	Med.	Int. Pom.	Nov. 23	5.00	45.00
*Goldsmith. Golden yellow	July 20	Med.	Int. Dec.	Nov. 25	4.00	35.00
Christmas Gold. Deep golden yellow	July 25	Med.	S. Pom.	Nov. 28	4.00	35.00
Yellow Cordova. Lemon yellow. Sport from Cordova	July 25	Med.	Int. Dec.	Nov. 30	4.00	35.00
Gold Coin. (Unalga). Deep lemon yellow	July 25	Med.	Int. Pom.	Dec. 1	4.00	35.00
Golden Modena. Deep lemon yellow. Sport from Modena	July 25	Med.	Int. Pom.	Dec. 5	4.00	35.00
December Gold. Deep golden yellow	Aug. 4	Med.	Int. Dec.	Dec. 15	4.00	35.00
Christmas Cheer. Buff yellow	Aug. 4	Med.	Int. Pom.	Dec. 15	4.00	35.00
Spun Gold. Deep lemon yellow	Aug. 4	Med.	Int. Dec.	Dec. 15	8.00	75.00
Vibrant. Deep lemon yellow	Aug. 4	Med.	Int. Dec.	Dec. 20	4.00	35.00
Yellow Snow. Deep lemon yellow	Aug. 4	Med.	Int. Pom.	Dec. 30	5.00	45.00

* Responds to disbudding.

§ Propagation rights reserved—see novelty section page 11.

SEE PAGES 1 to 4 FOR CULTURAL POINTERS
FOR SINGLE AND ANEMONE VARIETIES SEE PAGES 18 and 19



Pompon and Decorative Varieties

WHITE

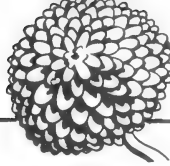
Name and Description	Last Pinch	Height	Size & Type	Matures	Price per	
					100	1000
Uvalda. Cream white.....	June 20	Med.	Int. Pom.	Oct. 10	\$4.00	\$35.00
White Jewell. White tinged with light lavender.....	June 20	Short	S. Pom.	Oct. 15	4.00	35.00
*Silver Ball.....	June 20	Med.	L. Pom.	Oct. 15	4.00	35.00
Irene.....	June 20	Short	S. Pom.	Oct. 18	4.00	35.00
Minong.....	June 25	Med.	S. Pom.	Oct. 20	4.00	35.00
Arcadia.....	June 30	Med.	Int. Pom.	Oct. 28	4.00	35.00
Sea Gull. Cream white.....	July 5	Tall	Int. Pom.	Nov. 1	4.00	35.00
*White Doty. Ivory white.....	July 5	Tall	L. Pom.	Nov. 1	4.00	35.00
Nancy Crain.....	July 5	Med.	S. Pom.	Nov. 5	15.00	125.00
Crystal Jewell.....	July 10	Tall	S. Pom.	Nov. 8	4.00	35.00
Rev. Horace Bushnell. Cream white.....	July 10	Tall	Int. Pom.	Nov. 8	4.00	35.00
Chicago Pearl. Ivory white.....	July 15	Med.	Int. Pom.	Nov. 15	4.00	35.00
Pearl.....	July 20	Tall	Int. Pom.	Nov. 20	4.00	35.00
Seafoam.....	July 25	Med.	Int. Pom.	Nov. 20	8.00	75.00
Priscilla.....	July 25	Tall	L. Pom.	Nov. 28	12.00	100.00
*White Yuletide.....	July 25	Short	Int. Pom.	Nov. 28	4.00	35.00
Cordova. Cream white.....	July 25	Med.	Int. Dec.	Nov. 30	4.00	35.00
Royal Queen.....	July 30	Med.	Int. Pom.	Dec. 5	4.00	35.00
Cameo. Ivory white.....	July 30	Med.	Int. Pom.	Dec. 5	5.00	45.00
Silver Star. Ivory white.....	July 30	Tall	Int. Pom.	Dec. 10	4.00	35.00
December Glory. Ivory white.....	Aug. 4	Med.	Int. Dec.	Dec. 15	4.00	35.00
Snow. Ivory white.....	Aug. 4	Med.	Int. Pom.	Dec. 30	4.00	35.00
§Revelation.....	Aug. 4	Med.	Int. Pom.	Jan. 5	5.00	45.00

BRONZE

Roman Bronze. Bronze suffused with pink. Sport Capt. Cook.....	June 25	Tall	Int. Pom.	Oct. 20	4.00	35.00
Adelaide. Dark reddish bronze.....	June 25	Med.	S. Pom.	Oct. 23	4.00	35.00
*Jemima. Dark reddish bronze.....	June 25	Med.	Int. Pom.	Oct. 23	4.00	35.00
Fire Bird. Dark reddish bronze.....	June 30	Med.	Int. Dec.	Oct. 25	4.00	35.00
Bronze Bulkeley. Bronze suffused with pink. Sport from Mrs. Bulkeley.....	July 10	Tall	Int. Pom.	Nov. 8	4.00	35.00
Cassandra. Orange bronze.....	July 10	Med.	Int. Pom.	Nov. 10	8.00	75.00
New York. Reddish bronze.....	July 10	Med.	S. Pom.	Nov. 13	4.00	35.00
*Bronze Masterpiece. Apricot bronze. Sport from Masterpiece.....	July 15	Med.	Int. Pom.	Nov. 15	6.00	50.00

* Responds to disbudding.

§ Propagation rights reserved—see novelty section page 11.



Pompon and Decorative Varieties

BRONZE—Continued

Name and Description	Last Pinch	Height	Size	Matures	Price per	
					100	1000
Fez. Deep reddish bronze	July 15	Medium	S. Pom.	Nov. 15	\$4.00	\$35.00
Princeton. Golden yellow suffused with orange.	July 15	Medium	Int. Dec.	Nov. 15	4.00	35.00
Gold Imperial. Golden yellow with deep yellow orange center	July 15	Tall	Int. Dec.	Nov. 15	8.00	75.00
Catherine. Light reddish bronze	July 20	Medium	Int. Dec.	Nov. 20	4.00	35.00
Legal Tender. Bronze and gold	July 20	Medium	Int. Dec.	Nov. 20	4.00	35.00
*Bronze Goldsmith. Mars orange. Sport from Goldsmith	July 20	Medium	Int. Dec.	Nov. 25	15.00	125.00
Apricon. Apricot yellow	July 20	Medium	Int. Pom.	Nov. 25	4.00	35.00
Dorothy Turner. Deep reddish bronze	July 20	Medium	Int. Pom.	Nov. 25	4.00	35.00
Glow. Orange, reddish orange at center	July 25	Medium	Int. Pom.	Nov. 30	4.00	35.00
Argo. Orange bronze	July 30	Short	Int. Pom.	Dec. 5	15.00	125.00
Cavalcade. Mandarin red. Golden bronze reverse	July 30	Medium	Int. Pom.	Dec. 10	4.00	35.00

PINK

Jewell. Lavender	June 20	Short	S. Pom.	Oct. 15	4.00	35.00
Dark Pink Jewell. Deep lavender. Sport from Jewell	June 20	Short	S. Pom.	Oct. 15	4.00	35.00
Pink Pearl. Rose pink	June 25	Medium	S. Pom.	Oct. 20	4.00	35.00
Capt. Cook. Deep rose pink	June 25	Tall	Int. Pom.	Oct. 20	4.00	35.00
Jessie. (Madeline). Light lavender	June 30	Medium	Int. Pom.	Oct. 25	4.00	35.00
Pink Dot. White with pink center	June 30	Medium	Int. Pom.	Oct. 25	4.00	35.00
*Lillian Doty. Light rose pink	July 5	Medium	L. Pom.	Nov. 1	4.00	35.00
Mrs. Morgan G. Bulkeley. Light rose pink suffused with orchid lavender	July 10	Tall	Int. Pom.	Nov. 8	4.00	35.00
*Thyra. Lavender	July 10	Medium	L. Pom.	Nov. 10	4.00	35.00
*Masterpiece. Tourmaline pink	July 15	Medium	Int. Pom.	Nov. 15	4.00	35.00
Minuet. Mauve to rose pink	July 20	Medium	Int. Pom.	Nov. 25	15.00	125.00
Usona. Lavender	July 20	Medium	Int. Pom.	Nov. 25	4.00	35.00
Prosperity. Deep lavender	July 30	Medium	Int. Dec.	Dec. 10	4.00	35.00
Pink Treasure Island. Light lavender	Aug. 4	Medium	Int. Dec.	Dec. 20	4.00	35.00

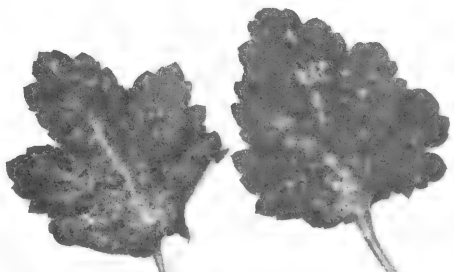
RED

Natoma. Flame scarlet	June 30	Short	Int. Dec.	Oct. 25	4.00	35.00
Robin Hood. Dark red	July 5	Medium	S. Pom.	Nov. 5	4.00	35.00
Navaho. Dark red	July 5	Medium	Int. Dec.	Nov. 5	8.00	75.00
Red Princeton. Brazil red	July 15	Medium	Int. Dec.	Nov. 15	4.00	35.00
Mrs. Mary Hooker. Deep red	July 15	Tall	L. Dec.	Nov. 15	4.00	35.00
Royal Crimson. Dark crimson	July 25	Medium	L. Dec.	Dec. 1	4.00	35.00

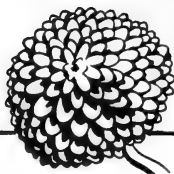
* Responds to disbudding.



Foliar Nematode Injury



Mildew



Single - Daisy Type - Varieties

YELLOW

Name and Description	Last Pinch	Height	Size	Matures	Price per	
					100	1000
Yellow Daisy. Deep lemon yellow.	June 30	Medium	Int.	Nov. 1	\$4.00	\$35.00
Lodestar. Golden yellow.	July 25	Medium	Int.	Nov. 25	15.00	125.00
*Golden Jane. Brilliant golden yellow. Sport from Jane.	July 25	Medium	Large	Nov. 30	8.00	75.00

WHITE

Nagona. Ivory white.	July 10	Medium	Int.	Nov. 10	4.00	35.00
*White Mensa. Ivory white	July 10	Medium	Int.	Nov. 10	4.00	35.00
Yukon	July 30	Tall	Int.	Dec. 10	4.00	35.00

BRONZE

October Bronze. Light bronze.	June 30	Medium	Int.	Oct. 28	4.00	35.00
Bronze Daisy. Light bronze.	June 30	Medium	Int.	Nov. 1	4.00	35.00
Bronze Buckingham. Light orange bronze.	July 5	Short	Int.	Nov. 3	4.00	35.00
*Mason's Bronze. Burnt orange	July 10	Short	Large	Nov. 10	4.00	35.00
Sylvanna. Bittersweet orange.	July 10	Medium	Int.	Nov. 10	15.00	125.00
*Apricot Valencia. Deep apricot buff. Sport from Dark Pink Valencia.	July 25	Medium	Large	Nov. 30	8.00	75.00
*Jane. Light buff bronze. Sport from Valencia.	July 25	Medium	Large	Nov. 30	4.00	35.00
Viking. Deep reddish bronze shading to orange	July 25	Medium	Int.	Dec. 1	4.00	35.00

PINK

October Pink. Light lavender.	June 30	Medium	Int.	Oct. 28	4.00	35.00
W. H. Buckingham. Rose pink.	July 5	Short	Int.	Nov. 3	4.00	35.00
Hasegawa Pink. Lavender.	July 20	Medium	Int.	Nov. 25	4.00	35.00
*Valencia. Orchid pink.	July 25	Medium	Large	Nov. 30	4.00	35.00
*Dark Pink Valencia. Deep orchid pink. Sport from Valencia.	July 25	Medium	Large	Nov. 30	4.00	35.00
Carillon. Deep orchid pink.	Aug. 4	Medium	Int.	Dec. 15	8.00	75.00
Rosalind. Rose pink	Aug. 4	Tall	Int.	Dec. 20	5.00	45.00

RED

Red Daisy. Deep red.	July 5	Medium	Int.	Nov. 5	4.00	35.00
*Europa. Cardinal red	July 10	Short	Large	Nov. 10	6.00	55.00
*Clara Holford. Deep red	July 10	Medium	Large	Nov. 10	4.00	35.00
*Red Melba. Light red.	July 10	Short	Large	Nov. 10	4.00	35.00
*Red Valencia. Brazil red. Sport from Valencia.	July 25	Medium	Large	Nov. 30	8.00	75.00
*Carnelia. Bittersweet red.	July 25	Short	Large	Nov. 30	4.00	35.00
Sarong. Crimson scarlet.	Aug. 4	Medium	Int. Sing.	Dec. 15	4.00	35.00

* Responds to disbudding.

FOR DISBUDED SPRAY INFORMATION SEE PAGE 32



Anemone Flowered Varieties

YELLOW

Name and Description	Last Pinch	Height	Size	Matures	Price per	
					100	1000
* Helios. Deep golden yellow	July 10	Medium	Large	Nov. 10	\$4.00	\$35.00
Sunray. Light lemon yellow	July 15	Medium	Int.	Nov. 15	4.00	35.00
* Susanne Miller. Buff yellow. Sport from Norma	July 20	Tall	Large	Nov. 18	4.00	35.00
* Yellow Rolinda. Light buff yellow. Sport from Rolinda	July 20	Medium	Int.	Nov. 23	4.00	35.00
Yellow Garza Supreme. Pale lemon yellow	Aug. 4	Short	Int.	Dec. 15	4.00	35.00

WHITE

* Graceland. White with yellow center	July 5	Medium	Int.	Oct. 28	4.00	35.00
Blanche	July 5	Medium	Int.	Nov. 1	4.00	35.00
* White Anemone	July 5	Tall	Int.	Nov. 5	4.00	35.00
* Shasta	July 10	Medium	Int.	Nov. 8	4.00	35.00
* Little America	July 10	Medium	Int.	Nov. 10	4.00	35.00
* White Freida. White with yellow cushion	July 15	Medium	Large	Nov. 15	4.00	35.00
* White Norma. White suffused with pink. Sport from Norma	July 20	Tall	Large	Nov. 18	4.00	35.00
* Nevada. White with chartreuse green cushion	July 20	Medium	Int.	Nov. 20	15.00	125.00
* Long Island Beauty. White with yellow cushion	July 20	Medium	Large	Nov. 20	4.00	35.00
* White Supreme. White suffused with pink	July 30	Medium	Large	Dec. 10	4.00	35.00
Garza Supreme.	Aug. 4	Short	Int.	Dec. 15	4.00	35.00

BRONZE

* Bronze Freida. Salmon buff with yellow center. Sport from Freida	July 15	Medium	Large	Nov. 15	4.00	35.00
Yolanda. Light orange bronze	July 20	Medium	Int.	Nov. 25	4.00	35.00
Chrome Emerald. Golden orange with gold cushion	July 25	Short	Int.	Dec. 1	4.00	35.00

PINK

Orchid Beauty. Orchid with golden cushion	July 15	Medium	Int.	Nov. 15	4.00	35.00
* Freida. Light lavender with yellow cushion	July 15	Medium	Large	Nov. 15	4.00	35.00
* Norma. Orchid pink petals with salmon cushion	July 20	Tall	Int.	Nov. 18	4.00	35.00
* Dark Pink Norma. Deep lavender. Sport from Norma	July 20	Tall	Int.	Nov. 18	4.00	35.00
* Beautiful Lady. Deep lavender rays with cream white cushion	July 20	Short	Large	Nov. 25	4.00	35.00
* Enchantress. Deep pink with light pink cushion	July 30	Medium	Large	Dec. 5	8.00	75.00
* Dark Pink Supreme. Lavender. Sport from Pink Supreme	July 30	Medium	Large	Dec. 10	4.00	35.00

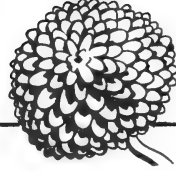
RED

* The Titan. Scarlet crimson with bronzy red cushion	July 10	Medium	Large	Nov. 10	4.00	35.00
* Red Rolinda. Deep reddish bronze. Sport from Rolinda	July 20	Medium	Int.	Nov. 23	4.00	35.00

* Responds to Disbudding.

FOR SHADING INFORMATION SEE PAGES 22 to 28

Gloeckner



Pot Plant Varieties

The varieties listed below include those of all types which have been found most suitable for pot culture. Types are indicated by Sing.—Single; Anem.—Anemone; Dec.—Decorative; Pom.—Pompon; Inc.—Incurved. Size of flower is indicated by S—Small; Int.—Intermediate; L—Large; L. F. Large flowering commercial.

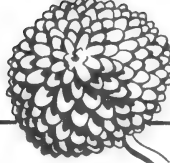
YELLOW

Name and Description	Last Pinch	Size & Type	Spray or Disbud	Matures	Price per	
					100	1000
Gold Lode. Golden yellow.....	Aug. 24	L.F. Dec.	Disbud	Oct. 1	\$4.00	\$35.00
Rodell Improved. Yellow. Sport from Rodell..	Aug. 24	Int. Pom.	Spray	Oct. 20	4.00	35.00
Mrs. H. E. Kidder. Bright yellow.....	Aug. 24	L.F. Inc.	Disbud	Oct. 20	4.00	35.00
Golden Spray. Deep lemon yellow.....	Sept. 3	Int. Pom.	Spray	Oct. 23	4.00	35.00
Blazing Gold. Deep golden yellow.....	Aug. 24	L.F. Inc.	Disbud	Oct. 25	4.00	35.00
Sunglow. Yellow.....	Aug. 24	L.F. Inc.	Disbud	Oct. 25	4.00	35.00
Golden Glory. Golden yellow.....	Aug. 24	L.F. Inc.	Disbud	Nov. 1	4.00	35.00
Saratoga. Bright golden yellow.....	Aug. 24	L.F. Inc.	Disbud	Nov. 1	4.00	35.00
Nuggets. Best early yellow.....	Aug. 24	S. Pom.	Spray	Nov. 5	4.00	35.00
Indianapolis Yellow. Lemon yellow. Sport from Indianapolis Pink.....	Aug. 29	L.F. Inc.	Disbud	Nov. 8	8.00	75.00
Cardonia. Deep golden yellow.....	Aug. 29	L.F. Inc.	Disbud	Nov. 10	4.00	35.00
Yellow Beauty. Golden yellow.....	Aug. 29	L. Pom.	Disbud	Nov. 10	4.00	35.00
Sunray. Yellow.....	Sept. 3	Int. Anem.	Spray	Nov. 15	4.00	35.00
Honey Dew. Lemon yellow.....	Sept. 3	L.F. Inc.	Disbud	Nov. 15	4.00	35.00
Yellow Fellow. Deep lemon yellow.....	Sept. 3	Int. Dec.	Spray	Nov. 15	4.00	35.00
Friendly Rival. Large golden yellow.....	Sept. 3	L.F. Inc.	Disbud	Nov. 20	4.00	35.00
Bonnaffon. DeLuxe. Golden yellow.....	Sept. 3	L.F. Inc.	Disbud	Nov. 20	4.00	35.00
Yellow Rolinda. Buff yellow.....	Sept. 8	Int. Anem.	Spray	Nov. 23	4.00	35.00
Sun Gold. Lemon yellow.....	Sept. 8	L.F. Dec.	Disbud	Nov. 25	4.00	35.00

WHITE

White Jewell. White suffused with pink.....	Aug. 24	S. Pom.	Spray	Oct. 15	4.00	35.00
Irene. White.....	Aug. 24	S. Pom.	Spray	Oct. 18	4.00	35.00
Minong. White.....	Aug. 24	S. Pom.	Spray	Oct. 20	4.00	35.00
Christina. White, sport from Rose Chochard..	Aug. 24	L.F. Inc.	Disbud	Oct. 20	4.00	35.00
Graceland. White with yellow center.....	Aug. 24	Int. Anem.	Spray	Oct. 28	4.00	35.00
Indianapolis White. White.....	Aug. 29	L.F. Inc.	Disbud	Nov. 8	4.00	35.00
Richard Mandel. Pure white.....	Aug. 29	L. Pom.	Disbud	Nov. 10	4.00	35.00
Little America. Pure White.....	Aug. 29	Int. Anem.	Disbud	Nov. 10	4.00	35.00
Marketeer. White.....	Sept. 3	L.F. Inc.	Disbud	Nov. 18	4.00	35.00
Long Island Beauty. White with yellow cushion	Sept. 3	L. Anem.	Disbud	Nov. 20	4.00	35.00
White Frick. White suffused with pink. Sport from Helen Frick.....	Sept. 3	L.F. Inc.	Disbud	Nov. 25	4.00	35.00

FOR POT PLANT CULTURE SEE PAGES 30-31



Pot Plant Varieties

BRONZE and RED

Name and Description	Last Pinch	Size & Type	Spray or Disbud	Blooming Date	Price per 100	Price per 1000
Indianola. Light bronze.....	Aug. 24	L.F. Inc.	Disbud	Oct. 10	\$4.00	\$35.00
Hilda Bergen. Bronze.....	Aug. 24	L.F. Inc.	Disbud	Oct. 25	4.00	35.00
Cambria. Golden bronze.....	Aug. 24	L.F. Inc.	Disbud	Oct. 25	6.00	55.00
Glitters. Bright bronze.....	Aug. 29	L.F. Dec.	Disbud	Oct. 28	4.00	35.00
Apricot Queen. Orange Bronze.....	Aug. 29	L.F. Inc.	Disbud	Nov. 1	4.00	35.00
Indianapolis Bronze. Buff bronze. Sport from Indianapolis Pink.....	Aug. 29	L.F. Inc.	Disbud	Nov. 8	4.00	35.00
Clara Holford. Deep red.....	Aug. 29	L. Sing.	Disbud	Nov. 10	4.00	35.00
Red Melba. Red.....	Aug. 29	L. Sing.	Disbud	Nov. 10	4.00	35.00
Bronze Masterpiece. Apricot bronze.....	Aug. 29	Int. Pom.	Disbud	Nov. 15	6.00	50.00
Gypsy. Pale reddish bronze.....	Aug. 29	S. Anem.	Spray	Nov. 15	4.00	35.00
Garnet King. Deep, bright red.....	Sept. 3	L.F. Dec.	Disbud	Nov. 18	4.00	35.00
Legal Tender. Bronze and Gold.....	Sept. 3	Int. Dec.	Disbud or Spray	Nov. 20	4.00	35.00
Red Rolinda. Deep reddish bronze.....	Sept. 8	Int. Anem.	Disbud or Spray	Nov. 23	4.00	35.00

PINK

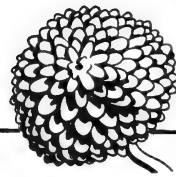
Early October. Light lavender.....	Aug. 24	L.F. Inc.	Disbud	Oct. 10	12.00	100.00
Jewell. Bright rose pink.....	Aug. 24	S. Pom.	Spray	Oct. 15	4.00	35.00
Dark Pink Jewell. Deep lavender. Sport from Jewell.....	Aug. 24	S. Pom.	Spray	Oct. 15	4.00	35.00
Rosabella. Rose Pink.....	Aug. 24	L.F. Inc.	Disbud	Oct. 25	4.00	35.00
Indianapolis Pink. Deep lavender with pale reverse.....	Aug. 29	L.F. Inc.	Disbud	Nov. 8	4.00	35.00
Thyra. Dark pink.....	Aug. 29	L. Pom.	Disbud	Nov. 10	4.00	35.00
Queen of Pinks. (Pink Mandel.) Lavender.....	Aug. 29	L. Pom.	Disbud	Nov. 10	4.00	35.00
Masterpiece. Tourmaline pink.....	Aug. 29	Int. Pom.	Disbud	Nov. 15	4.00	35.00
Helen Frick. Rose Pink.....	Sept. 3	L. F. Inc.	Disbud	Nov. 25	4.00	35.00
Beautiful Lady. Deep lavender rays with cream white cushion.....	Sept. 3	L. Anem.	Disbud	Nov. 25	4.00	35.00



Pot Plant Var. Golden Glory



New 1944 Shipping Carton



The Use of Black Cloth Shading to Advance the Flowering Season

The varieties in the following list lend themselves satisfactorily to black cloth shading. The dates opposite the varieties are those found most satisfactory when the given blooming date is desired.

Use a good durable Black Cloth which has no less than 64 x 104 threads to the inch. Best results are obtained when the light intensity under the cloth when applied is 2 ft. candles or less. More light intensity than this will result in delayed flowering and unevenness in bloom.

The cloth should be applied at 5:00 P.M. and removed at 7 A.M. Shading is continued on pompons until the latest buds show color and most of the flowers are well developed. On the large flowering varieties shading can be discontinued after all flowering buds have attained the diameter of approximately half an inch.

Make sure that covering is complete on all benches shaded, as any leaks in light will cause uneven spots in the bench at flowering time.

It is not recommended that the large flowering varieties be grown outdoors under shade, unless proper protection is provided. Fall rains and wind storms play havoc with large flowers when not protected. Therefore, inside growing is suggested unless proper overhead protection is provided.

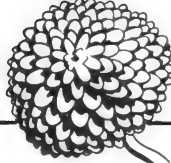
Best results are obtained when varieties of approximately the same blooming date are used for any one particular shading. When a spread in blooming dates is desired, repeated shading of a few varieties at weekly or ten-day intervals has proven more satisfactory than grouping a large number of varieties into any one shading. The shading dates given are those which have been found to be best for the respective varieties. We recommend benching six weeks prior to shading.

When only one stem is desired following a pinch, soft pinching should be practiced. Removal of the mere tip is best for examples when standards are pinched to avoid crown buds. Thus the final pinch on standards should be a soft pinch.

When several breaks are desired as in pinching of pompons, the pinch should be low enough to remove all of the soft growth. The lowest point at which the stem breaks off readily is about right for this type of pinch.

For strong stems a single pinch is best. With more pinches plants become successively weaker.

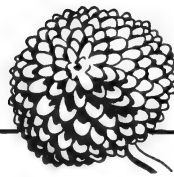
As an added suggestion, we would recommend the removal of black cloth after night fall to allow for a better circulation of air. This would prevent the accumulation of dampness and the unfavorable results that usually occur therefrom. This of course will cause considerable extra work as the cloth must be replaced before morning. We feel however, that as this will improve the growth and the foliage it will be well worth the effort. Perfection is never obtained without added effort.



Large Flowering Varieties

VARIETY	COLOR	Date of Benching	Date of Last Pinch	SHADE	BLOOM
BLAZING GOLD	Yellow	May 3	May 31	June 28	August-23-30
SILVER SHEEN	White	May 3	May 31	June 28	
HILDA BERGEN	Bronze	May 3	May 31	June 28	
PINK CHIEF	Pink	May 10	June 7	July 5	
BLAZING GOLD	Yellow	May 10	June 7	July 5	Aug. 30—Sept. 6
SILVER SHEEN	White	May 10	June 7	July 5	
HILDA BERGEN	Bronze	May 10	June 7	July 5	
PINK CHIEF	Pink	May 17	June 14	July 12	
GOOD NEWS	Yellow	May 10	June 7	July 5	September 6-13
ALBATROSS	White	May 10	June 7	July 5	
DETROIT NEWS	Bronze	May 10	June 7	July 5	
ROSABELLA	Pink	May 10	June 7	July 5	
BLAZING GOLD	Yellow	May 17	June 14	July 12	
SILVER SHEEN	White	May 17	June 14	July 12	
HILDA BERGEN	Bronze	May 17	June 14	July 12	September 13-20
PINK CHIEF	Pink	May 24	June 21	July 19	
GOOD NEWS	Yellow	May 17	June 14	July 12	
ALBATROSS	White	May 17	June 14	July 12	
DETROIT NEWS	Bronze	May 17	June 14	July 12	September 21-27
ROSABELLA	Pink	May 17	June 14	July 12	
GOOD NEWS	Yellow	May 24	June 21	July 19	
ALBATROSS	White	May 24	June 21	July 19	
DETROIT NEWS	Bronze	May 24	June 21	July 19	Sept. 27—Oct. 4
ROSABELLA	Pink	May 24	June 21	July 19	
INDIANAPOLIS WHITE	White	May 24	June 21	July 19	
INDIANAPOLIS BRONZE	Bronze	May 24	June 21	July 19	
INDIANAPOLIS PINK	Pink	May 24	June 21	July 19	
INDIANAPOLIS YELLOW	Yellow	May 24	June 21	July 19	
GOOD NEWS	Yellow	May 31	June 28	July 26	October 4-11
ALBATROSS	White	May 31	June 28	July 26	
DETROIT NEWS	Bronze	May 31	June 28	July 26	
ROSABELLA	Pink	May 31	June 28	July 26	
HONEY DEW	Yellow	May 31	June 28	July 26	October 11-18
YELLOW MEFO	Yellow	May 31	June 28	July 26	
MEFO	White	May 31	June 28	July 26	
INDIANAPOLIS WHITE	White	May 31	June 28	July 26	
INDIANAPOLIS BRONZE	Bronze	May 31	June 28	July 26	
INDIANAPOLIS PINK	Pink	May 31	June 28	July 26	
INDIANAPOLIS YELLOW	Yellow	May 31	June 28	July 26	August 2
GOOD NEWS	Yellow	June 7	July 5	August 2	
ALBATROSS	White	June 7	July 5	August 2	
DETROIT NEWS	Bronze	June 7	July 5	August 2	
J. W. PRINCE	Pink	June 7	July 5	August 2	October 11-18
MRS. DAVID ROY	Red	May 31	June 28	July 26	
HONEY DEW	Yellow	June 7	July 5	August 2	
YELLOW MEFO	Yellow	June 7	July 5	August 2	
MEFO	White	June 7	July 5	August 2	
INDIANAPOLIS WHITE	White	June 7	July 5	August 2	
INDIANAPOLIS BRONZE	Bronze	June 7	July 5	August 2	
INDIANAPOLIS PINK	Pink	June 7	July 5	August 2	August 2
INDIANAPOLIS YELLOW	Yellow	June 7	July 5	August 2	
ORCHID QUEEN	Pink	June 7	July 5	August 2	

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Large Flowering Varieties

VARIETY	COLOR	Date of Benching	Date of Last Pinch	SHADE	BLOOM
GOLDEN PEARSON	Yellow	June 7	July 5	August 2	} October 17-25
MRS. DAVID ROY	Red	June 7	July 5	August 2	
HONEY DEW	Yellow	June 14	July 12	August 9	
YELLOW MEFO	Yellow	June 14	July 12	August 9	
INDIANAPOLIS YELLOW	Yellow	June 14	July 12	August 9	
INDIANAPOLIS WHITE	White	June 14	July 12	August 9	
MEFO	White	June 14	July 12	August 9	
INDIANAPOLIS BRONZE	Bronze	June 14	July 12	August 9	
INDIANAPOLIS PINK	Pink	June 14	July 12	August 9	
ORCHID QUEEN	Pink	June 14	July 12	August 9	

Pompons, Decorative, Single and Anemone Types

YELLOW IRENE	Yellow	May 3	May 24	June 21	} August 9-16
IRENE	White	May 3	May 24	June 21	
MINONG	White	May 3	May 24	June 21	} August 16-23
WHITE JEWELL	White	May 3	May 24	June 21	
JEWELL	Pink	May 3	May 24	June 21	
YELLOW IRENE	Yellow	May 10	May 31	June 28	
IRENE	White	May 10	May 31	June 28	} August 23-30
YELLOW DOT	Yellow	May 3	May 24	June 21	
MARY L. HALL	Yellow	May 3	May 24	June 21	
YELLOW DAISY	Yellow	May 3	May 24	June 21	
NUGGETS	Yellow	May 3	May 24	June 21	
MINONG	White	May 10	May 31	June 28	
WHITE JEWELL	White	May 10	May 31	June 28	
JEWELL	Pink	May 10	May 31	June 28	
PINK PEARL	Pink	May 10	May 31	June 28	
YELLOW DOT	Yellow	May 10	May 31	June 28	
MARY L. HALL	Yellow	May 10	May 31	June 28	
YELLOW DAISY	Yellow	May 10	May 31	June 28	
NUGGETS	Yellow	May 10	May 31	June 28	
JESSIE	Pink	May 10	May 31	June 28	
MINONG	White	May 17	June 7	July 5	
WHITE JEWELL	White	May 17	June 7	July 5	
JEWELL	Pink	May 17	June 7	July 5	
PINK PEARL	Pink	May 17	June 7	July 5	
YELLOW DOT	Yellow	May 17	June 7	July 5	} September 6-13
MARY L. HALL	Yellow	May 17	June 7	July 5	
YELLOW DAISY	Yellow	May 17	June 7	July 5	
NUGGETS	Yellow	May 17	June 7	July 5	
SEA GULL	White	May 17	June 7	July 5	
*LITTLE AMERICA	White	May 17	June 7	July 5	
BLANCHE	White	May 17	June 7	July 5	
JESSIE	Pink	May 17	June 7	July 5	
ADELAIDE	Bronze	May 17	June 7	July 5	
FIREBIRD	Bronze	May 17	June 7	July 5	
PIXIE	Yellow	May 17	June 7	July 5	} September 13-20
YELLOW BUSHNELL	Yellow	May 17	June 7	July 5	
YELLOW FELLOW	Yellow	May 17	June 7	July 5	
YELLOW NEW YORK	Yellow	May 17	June 7	July 5	
*HELIOS	Yellow	May 17	June 7	July 5	

* Good Disbudded.

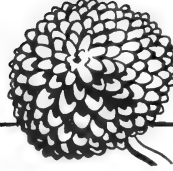


Pompons, Decorative, Single and Anemone Types

VARIETY	COLOR	Date of Benching	Date of Last Pinch	SHADE	BLOOM	
*LITTLE AMERICA	White	May 17	June 7	July 5	} September 13-20	
*WHITE FREIDA	White	May 17	June 7	July 5		
NAGONA	White	May 17	June 7	July 5		
CRYSTAL JEWELL	White	May 17	June 7	July 5		
REV. H. BUSHNELL	White	May 17	June 7	July 5		
BLANCHE	White	May 17	June 7	July 5		
FEZ	Bronze	May 17	June 7	July 5		
NEW YORK	Bronze	May 17	June 7	July 5		
ROBIN HOOD	Red	May 17	June 7	July 5		
NAVAHO	Red	May 17	June 7	July 5		
*FREIDA	Pink	May 17	June 7	July 5		
MRS. M. G. BULKELEY	Pink	May 17	June 7	July 5		
YELLOW DOT	Yellow	May 24	June 14	July 12		
YELLOW ARCADIA	Yellow	May 24	June 14	July 12		
MARY L. HALL	Yellow	May 24	June 14	July 12		
YELLOW DAISY	Yellow	May 24	June 14	July 12		
NUGGETS	Yellow	May 24	June 14	July 12		
*GOLDEN HERALD	Yellow	May 24	June 14	July 12		
SEA GULL	White	May 24	June 14	July 12		
ROMAN BRONZE	Bronze	May 24	June 14	July 12		
ADELAIDE	Bronze	May 24	June 14	July 12		
FIREBIRD	Bronze	May 24	June 14	July 12		
OCTOBER BRONZE	Bronze	May 24	June 14	July 12		
*CLARA HOLFORD	Red	May 24	June 14	July 12		
JESSIE	Pink	May 24	June 14	July 12		
PINK DOT	Pink	May 24	June 14	July 12		
CAPTAIN COOK	Pink	May 24	June 14	July 12		
OCTOBER PINK	Pink	May 24	June 14	July 12		
PIXIE	Yellow	May 24	June 14	July 12		} September 20-27
YELLOW BUSHNELL	Yellow	May 24	June 14	July 12		
YELLOW FELLOW	Yellow	May 24	June 14	July 12		
YELLOW NEW YORK	Yellow	May 24	June 14	July 12		
*HELIOS	Yellow	May 24	June 14	July 12		
*LITTLE AMERICA	White	May 24	June 14	July 12		
*WHITE FREIDA	White	May 24	June 14	July 12		
NAGONA	White	May 24	June 14	July 12		
CRYSTAL JEWELL	White	May 24	June 14	July 12		
REV. H. BUSHNELL	White	May 24	June 14	July 12		
BLANCHE	White	May 24	June 14	July 12		
FEZ	Bronze	May 24	June 14	July 12		
NEW YORK	Bronze	May 24	June 14	July 12		
ROBIN HOOD	Red	May 24	June 14	July 12		
NAVAHO	Red	May 24	June 14	July 12		
*FREIDA	Pink	May 24	June 14	July 12		
MRS. M. G. BULKELEY	Pink	May 24	June 14	July 12		
YELLOW DOT	Yellow	May 31	June 21	July 19		
YELLOW ARCADIA	Yellow	May 31	June 21	July 19		
MARY L. HALL	Yellow	May 31	June 21	July 19		
YELLOW DAISY	Yellow	May 31	June 21	July 19		
NUGGETS	Yellow	May 31	June 21	July 19		
*GOLDEN HERALD	White	May 31	June 21	July 19		

* Good Disbudded.

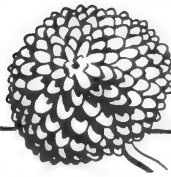
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Pompons, Decorative, Single and Anemone Types

VARIETY	COLOR	Date of Benching	Date of Last Pinch	SHADE	BLOOM
SEA GULL	White	May 31	June 21	July 19	} September 20-27
ROMAN BRONZE	Bronze	May 31	June 21	July 19	
ADELAIDE	Bronze	May 31	June 21	July 19	
FIREBIRD	Bronze	May 31	June 21	July 19	
OCTOBER BRONZE	Bronze	May 31	June 21	July 19	
*CLARA HOLFORD	Red	May 31	June 21	July 19	
JESSIE	Pink	May 31	June 21	July 19	
PINK DOT	Pink	May 31	June 21	July 19	
CAPTAIN COOK	Pink	May 31	June 21	July 19	
OCTOBER PINK	Pink	May 31	June 21	July 19	
PIXIE	Yellow	May 31	June 21	July 19	} Sept. 27—Oct. 4
YELLOW BUSHNELL	Yellow	May 31	June 21	July 19	
YELLOW FELLOW	Yellow	May 31	June 21	July 19	
YELLOW NEW YORK	Yellow	May 31	June 21	July 19	
*HELIOS	Yellow	May 31	June 21	July 19	
*LITTLE AMERICA	White	May 31	June 21	July 19	
*WHITE FREIDA	White	May 31	June 21	July 19	
NAGONA	White	May 31	June 21	July 19	
CRYSTAL JEWELL	White	May 31	June 21	July 19	
REV. H. BUSHNELL	White	May 31	June 21	July 19	
*BLANCHE	White	May 31	June 21	July 19	
FEZ	Bronze	May 31	June 21	July 19	
NEW YORK	Bronze	May 31	June 21	July 19	
*BRONZE FREIDA	Bronze	May 31	June 21	July 19	
PRINCETON	Bronze	May 31	June 21	July 19	
ROBIN HOOD	Red	May 31	June 21	July 19	
NAYAHO	Red	May 31	June 21	July 19	
*FREIDA	Pink	May 31	June 21	July 19	
MRS. M. G. BULKELEY	Pink	May 31	June 21	July 19	
YELLOW DOT	Yellow	June 7	June 28	July 26	} Sept. 27—Oct. 4
YELLOW ARCADIA	Yellow	June 7	June 28	July 26	
MARY L. HALL	Yellow	June 7	June 28	July 26	
YELLOW DAISY	Yellow	June 7	June 28	July 26	
NUGGETS	Yellow	June 7	June 28	July 26	
*GOLDEN HERALD	Yellow	June 7	June 28	July 26	
SEA GULL	Yellow	June 7	June 28	July 26	
ROMAN BRONZE	Bronze	June 7	June 28	July 26	
ADELAIDE	Bronze	June 7	June 28	July 26	
FIREBIRD	Bronze	June 7	June 28	July 26	
OCTOBER BRONZE	Bronze	June 7	June 28	July 26	
*CLARA HOLFORD	Red	June 7	June 28	July 26	
RED DAISY	Red	June 7	June 28	July 26	
JESSIE	Pink	June 7	June 28	July 26	
PINK DOT	Pink	June 7	June 28	July 26	
CAPTAIN COOK	Pink	June 7	June 28	July 26	
OCTOBER PINK	Pink	June 7	June 28	July 26	
YELLOW BUSHNELL	Yellow	June 7	June 28	July 26	} October 4-11
YELLOW FELLOW	Yellow	June 7	June 28	July 26	
YELLOW NEW YORK	Yellow	June 7	June 28	July 26	

* Good Disbudded.

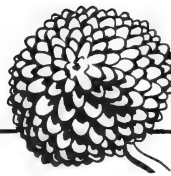


Pompons, Decorative, Single and Anemone Types

VARIETY	COLOR	Date of Benching	Date of Last Pinch	SHADE	BLOOM
*HELIOS	Yellow	June 7	June 28	July 26	} October 4-11
*LITTLE AMERICA	White	June 7	June 28	July 26	
*WHITE FREIDA	White	June 7	June 28	July 26	
NAGONA	White	June 7	June 28	July 26	
CRYSTAL JEWELL	White	June 7	June 28	July 26	
REV. H. BUSHNELL	White	June 7	June 28	July 26	
BLANCHE	White	June 7	June 28	July 26	
FEZ	Bronze	June 7	June 28	July 26	
NEW YORK	Bronze	June 7	June 28	July 26	
*BRONZE FREIDA	Bronze	June 7	June 28	July 26	
PRINCETON	Bronze	June 7	June 28	July 26	
ROBIN HOOD	Red	June 7	June 28	July 26	
NAVAHO	Red	June 7	June 28	July 26	
RED PRINCETON	Red	June 7	June 28	July 26	
*FREIDA	Pink	June 7	June 28	July 26	
MRS. M. G. BULKELEY	Pink	June 7	June 28	July 26	
MASTERPIECE	Pink	June 7	June 28	July 26	
YELLOW DOT	Yellow	June 14	July 5	August 2	
YELLOW ARCADIA	Yellow	June 14	July 5	August 2	
MARY L. HALL	Yellow	June 14	July 5	August 2	
YELLOW DAISY	Yellow	June 14	July 5	August 2	
NUGGETS	Yellow	June 14	July 5	August 2	
*GOLDEN HERALD	Yellow	June 14	July 5	August 2	
SEA GULL	White	June 14	July 5	August 2	
ROMAN BRONZE	Bronze	June 14	July 5	August 2	
ADELAIDE	Bronze	June 14	July 5	August 2	
FIREBIRD	Bronze	June 14	July 5	August 2	
OCTOBER BRONZE	Bronze	June 14	July 5	August 2	
*CLARA HOLFORD	Red	June 14	July 5	August 2	
RED DAISY	Red	June 14	July 5	August 2	
JESSIE	Pink	June 14	July 5	August 2	
PINK DOT	Pink	June 14	July 5	August 2	
CAPTAIN COOK	Pink	June 14	July 5	August 2	
OCTOBER PINK	Pink	June 14	July 5	August 2	
PIXIE	Yellow	June 14	July 5	August 2	} October 11-18
YELLOW BUSHNELL	Yellow	June 14	July 5	August 2	
YELLOW FELLOW	Yellow	June 14	July 5	August 2	
YELLOW NEW YORK	Yellow	June 14	July 5	August 2	
*HELIOS	Yellow	June 14	July 5	August 2	
*LITTLE AMERICA	White	June 14	July 5	August 2	
*WHITE FREIDA	White	June 14	July 5	August 2	
NAGONA	White	June 14	July 5	August 2	
CRYSTAL JEWELL	White	June 14	July 5	August 2	
REV. H. BUSHNELL	White	June 14	July 5	August 2	
BLANCHE	White	June 14	July 5	August 2	
FEZ	Bronze	June 14	July 5	August 2	
NEW YORK	Bronze	June 14	July 5	August 2	
*BRONZE FREIDA	Bronze	June 14	July 5	August 2	
PRINCETON	Bronze	June 14	July 5	August 2	
ROBIN HOOD	Red	June 14	July 5	August 2	
NAVAHO	Red	June 14	July 5	August 2	
RED PRINCETON	Red	June 14	July 5	August 2	
*FREIDA	Pink	June 14	July 5	August 2	

* Good Disbudded.

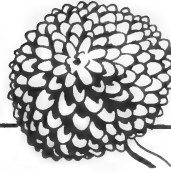
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Pompons, Decorative, Single and Anemone Types

VARIETY	COLOR	Date of Benching	Date of Last Pinch	SHADE	BLOOM	
MRS. M. G. BULKELEY	Pink	June 14	July 5	August 2	} October 11-18	
YELLOW DOT	Yellow	June 21	July 12	August 9		
YELLOW ARCADIA	Yellow	June 21	July 12	August 9		
MARY L. HALL	Yellow	June 21	July 12	August 9		
YELLOW DAISY	Yellow	June 21	July 12	August 9		
NUGGETS	Yellow	June 21	July 12	August 9		
*GOLDEN HERALD	Yellow	June 21	July 12	August 9		
SEA GULL	White	June 21	July 12	August 9		
ROMAN BRONZE	Bronze	June 28	July 12	August 9		
FIREBIRD	Bronze	June 28	July 12	August 9		
OCTOBER BRONZE	Bronze	June 28	July 12	August 9		
*CLARA HOLFORD	Red	June 28	July 12	August 9		
RED DAISY	Red	June 28	July 12	August 9		
JESSIE	Pink	June 28	July 12	August 9		
PINK DOT	Pink	June 28	July 12	August 9		
CAPTAIN COOK	Pink	June 28	July 12	August 9		
PIXIE	Yellow	June 28	July 12	August 9		} October 18-25
YELLOW BUSHNELL	Yellow	June 28	July 12	August 9		
YELLOW FELLOW	Yellow	June 28	July 12	August 9		
YELLOW NEW YORK	Yellow	June 28	July 12	August 9		
*HELIOS	Yellow	June 28	July 12	August 9		
*LITTLE AMERICA	White	June 28	July 12	August 9		
*WHITE FREIDA	White	June 28	July 12	August 9		
CRYSTAL JEWELL	White	June 28	July 12	August 9		
REV. H. BUSHNELL	White	June 28	July 12	August 9		
BLANCHE	White	June 28	July 12	August 9		
FEZ	Bronze	June 28	July 12	August 9		
NEW YORK	Bronze	June 28	July 12	August 9		
*BRONZE FREIDA	Bronze	June 28	July 12	August 9		
PRINCETON	Bronze	June 28	July 12	August 9		
ROBIN HOOD	Red	June 28	July 12	August 9		
NAVAHO	Red	June 28	July 12	August 9		
RED PRINCETON	Red	June 28	July 12	August 9		
*FREIDA	Pink	June 28	July 12	August 9		
MRS. M. G. BULKELEY	Pink	June 28	July 12	August 9		
MASTERPIECE	Pink	June 28	July 12	August 9		
YELLOW DOT	Yellow	July 5	July 17	August 16		
YELLOW ARCADIA	Yellow	July 5	July 17	August 16		
MARY L. HALL	Yellow	July 5	July 17	August 16		
YELLOW DAISY	Yellow	July 5	July 17	August 16		
NUGGETS	Yellow	July 5	July 17	August 16		
*GOLDEN HERALD	Yellow	July 5	July 17	August 16		
SEA GULL	White	July 5	July 17	August 16		
ROMAN BRONZE	Bronze	July 5	July 17	August 16		
*CLARA HOLFORD	Red	July 5	July 17	August 16		
RED DAISY	Red	July 5	July 17	August 16		
JESSIE	Pink	July 5	July 17	August 16		
PINK DOT	Pink	July 5	July 17	August 16		
CAPTAIN COOK	Pink	July 5	July 17	August 16		
OCTOBER PINK	Pink	July 5	July 17	August 16		

* Good Disbudded.



To Delay Flowering by Use of Artificial Light

It has usually been considered that lighting pompons greatly reduces the number of flowers per spray. Experiments conducted at the United States Department of Agriculture shows that this occurs if light is applied at or soon after the time of bud formation. When light treatments were started at least 2 weeks before bud formation and applied in the form of nightly interruptions, no supplementary light being used while the buds developed, blooming could be delayed without seriously reducing flower count.

Experience will prove the best guide in applying methods to extend the flowering season. The choice of varieties, season of bloom and light treatment, must be made by the individual grower. If the blooming season is to be extended for only several weeks, then the light exposure period per night can be short, not to exceed 30 minutes of light from 40- to 60- watt lamps. If the blooming season is to be extended further, a longer period of light, but not more than 1 hour nightly, should be used. To be most effective, this light should be applied at or near the middle of the night.

USEFUL HINTS

- 1—Select vigorous growing, midseason to late-flowering varieties for delayed flowering.
- 2—Planting date may be several weeks later than when no lights are used.
- 3—Light with 40- to 60- watt lamps using suitable reflectors hung at four-foot intervals over the bench. Too low a light intensity will not retard bud development.
- 4—Start lights at least 2 weeks before buds are normally visible for the variety, usually not later than August 10th. Starting after this date may cause malformed flowers and long necks.
- 5—Use lights EVERY NIGHT at or near midnight, for not more than one hour.
- 6—Pinch pompons and disbuds the last time 30 days before the light treatment is discontinued. This will prevent varieties from getting too leggy.
- 7—Night temperatures should be 55 degrees with day temperatures from 10 to 15 degrees higher. Cooler night temperatures will induce blindness.
- 8—Discontinue lights according to the blooming time desired. For varieties normally blooming before November 15, allow 9 weeks after the lights are stopped until blooming; for varieties blooming after November 15 allow 10 to 11 weeks; and for those blooming in December, 11 to 12 weeks.
- 9—Be careful that the light from the bench treated does not light a bench nearby that is not treated. This will cause part of the bench not under treatment to be delayed in flowering and consequently upset growing plans for bench not under treatment.
- 10—Standards, Disbuds, Pot-Plants, and Pompons respond alike to this delayed flowering treatment.



Chrysanthemum Pot Plant Culture

Well grown short pot plants of Chrysanthemums have been finding a ready market in various sections of the country. We feel that many growers have been neglecting this valuable Fall potted plant. In many cases, poor attempts have been made in growing this plant and we offer the following suggestions for your consideration:

VARIETIES—The varieties best suited to pot culture are those which lateral freely and have a medium to low growing habit. A variety whose laterals tend to spread is superior to one with a more upright growth. Good examples are: Bonnafon De Luxe and Queen of Pinks.

PLANTING—Cuttings may be planted into 2½" pots in May and later shifted into the larger pot for finishing. If this is done care must be used so as not to get the plants hardened too much before shifting. A more efficient and easier way is to set the large pots on the bench, fill them with potting soil and plant the cuttings directly into the finishing pots.

Three cuttings should be planted in a six inch pot, while four may be required for a large pot.

WATERING AND HUMIDITY—After planting, water **thoroughly** to set the soil around the plant roots. Repeat this type of watering when the soil gets on the dry side. Organic matter in the soil will facilitate watering and will tend to avoid extreme fluctuations in moisture supply. Keep humidity in house by wetting down bench and walks. Do not sprinkle foliage of plants.

PINCHING—Three pinches are sufficient for a good short compact pot plant. The first pinch should be approximately 15 days after planting. The second pinch about 30 days after planting and the third and last pinch as listed on the chart. Some of the varieties listed grow taller than others, however by observing the last pinching date all the varieties listed should finish reasonably uniform in height. A hard pinch is suggested when the last pinch is delayed until after shading. For example: Yellow Beauty when shaded July 1st and pinched July 11th.

FERTILIZING—The best program is to have regular soil tests and feed as need is indicated by these tests. In absence of these facilities, and starting with a relatively fertile potting soil, several light feedings should be made with a complete fertilizer such as Electra. This can safely be used at the rate of 1 Teaspoonful per 6" pot. This should be applied when soil is moist and never on a dry soil.

The foliage should retain a bright green lustre throughout the life of the plant, and the lower leaves should never be allowed to lose their color and turn to a light green due to low fertility. A strong well grown pot plant is a well fed plant.

DISEASES AND INSECTS—Pot Plants should be sprayed regularly with one of the rotenone insecticides for control of red spider. Pyrethrum sprays or tartar emetic will control thrip and leaf tier. If plants are to be grown outdoors before final potting the foliage should be kept covered with a spray such as Bordeaux Mixture or Fermate to prevent leaf spot. If this is not done considerable foliage loss may result during wet cool weather.

SHADING—Same procedure as for cut flowers. Black cloth should be new or in best of condition for very early shadings to avoid delayed and uneven blooming. When possible take cloth off at night, replacing before daylight.

DISBUDDING

WITH POMPONS—Remove center bud except on the button types. This gives better spacing to the remaining flowers. Also the center bud generally matures earlier than the surrounding buds, giving the appearance of irregular blooming and premature aging. Remove this bud as early as convenient.

WITH DISBUDS—Disbudding must be done early, late disbudding results in small flowers and weak and elongated stems directly below the flowers.

HEIGHT—By following our directions pompons grown in 5½" or 6" pots will be 11" to 13" high. Disbuds will grow 14" to 17" above the top of the pot.



Continuous Bloom Schedule

YELLOW

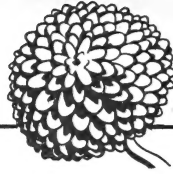
Plant	Last Pinch	Shade	Approx. Date of Bloom
GOLDEN SPRAY			
May 15	July 16	July 1	September 1
June 1	July 30	July 15	September 20
June 15	August 16	August 1	October 5
July 1	September 3	No Shade	October 23
BLAZING GOLD			
May 15	July 6	July 1	September 10
June 1	July 20	July 15	September 25
June 15	August 6	August 1	October 10
July 1	August 24	No Shade	October 25
GOLDEN GLORY			
May 15	July 6	July 1	September 5
June 1	July 20	July 15	September 25
June 15	August 6	August 1	October 5
July 1	August 24	No Shade	November 1
CARDONIA			
May 15	July 4	July 1	September 15
June 1	July 18	July 15	October 8
June 15	August 4	August 1	October 20
July 1	August 29	No Shade	November 10
YELLOW BEAUTY			
May 15	July 11	July 1	October 1
June 1	July 25	July 15	October 15
June 15	August 11	August 1	October 25
July 1	August 29	No Shade	November 10
SUNRAY			
May 15	July 1	July 1	September 5
June 1	July 15	July 15	September 20
June 15	August 1	August 1	October 5
July 1	September 3	No Shade	November 15
BONNAFFON DE LUXE			
May 15	July 1	July 1	September 28
June 1	July 15	July 15	October 10
June 15	August 1	August 1	October 25
July 1	September 3	No Shade	November 20
CHRISTINA			
May 15	July 4	July 1	September 1
June 1	July 18	July 15	September 15
June 15	August 4	August 1	October 1
July 1	August 24	No Shade	October 20
GRACELAND			
May 15	July 11	July 1	September 10
June 1	July 25	July 15	September 25
June 15	August 11	August 1	October 10
July 1	August 24	No Shade	October 25
RICHARD MANDEL			
May 15	July 4	July 1	September 10
June 1	July 18	July 15	September 25
June 15	August 4	August 1	October 10
July 1	August 29	No Shade	November 10
LITTLE AMERICA			
May 15	July 6	July 1	September 10
June 1	July 20	July 15	September 25
June 15	August 6	August 1	October 10
July 1	August 29	No Shade	November 10

WHITE

BRONZE

Plant	Last Pinch	Shade	Approx. Date of Bloom
HILDA BERGEN			
May 15	July 1	July 1	August 25
June 1	July 15	July 15	September 10
June 15	August 1	August 1	September 25
July 1	August 24	No Shade	October 25
CAMBRIA			
May 15	July 6	July 1	September 5
June 1	July 20	July 15	September 20
June 15	August 6	August 1	October 5
July 1	August 29	No Shade	October 25
GLITTERS			
May 15	July 11	July 1	September 1
June 1	July 25	July 15	September 15
June 15	August 11	August 1	October 1
July 1	August 29	No Shade	October 28
APRICOT QUEEN			
May 15	July 11	July 1	September 1
June 1	July 25	July 15	September 15
June 15	August 11	August 1	October 1
July 1	August 29	No Shade	November 1
GYPSY			
May 15	July 1	July 1	September 20
June 1	July 15	July 15	October 5
June 15	August 1	August 1	October 20
July 1	August 29	No Shade	November 15
RED ROLINDA			
May 15	July 1	July 1	September 20
June 1	July 15	July 15	October 10
June 15	August 10	August 1	October 25
July 1	September 8	No Shade	November 23
JEWELL			
May 15	July 1	July 1	August 30
June 1	July 15	July 15	September 15
June 15	August 1	August 1	September 30
July 1	August 24	No Shade	October 15
INDIANAPOLIS PINK			
May 15	July 11	July 1	September 5
June 1	July 25	July 15	September 20
June 15	August 11	August 1	October 5
July 1	August 29	No Shade	November 8
THYRA			
May 15	July 10	July 1	September 20
June 1	July 25	July 15	October 5
June 15	August 10	August 1	October 15
July 1	August 29	No Shade	November 10
QUEEN OF PINKS			
May 15	July 1	July 1	September 10
June 1	July 15	July 15	September 25
June 15	August 1	August 1	October 10
July 1	August 29	No Shade	November 10
HELEN FRICK			
May 15	July 1	July 1	September 28
June 1	July 15	July 15	October 10
June 15	August 1	August 1	October 30
July 1	September 3	No Shade	November 25

PINK



Disbudded Sprays

Good Chrysanthemums result from the careful and thorough practice of the basic principles of plant growth, plus the knowledge of certain differences in the nature of various varieties. Growing disbudded sprays is a modification in culture which is very much worthwhile.

The procedure in growing disbudded sprays, is to wait until the crown bud forms, then remove all vegetative shoots but three. Later when terminal buds appear dis-bud each shoot similar to the normal disbudding of standards. When the blooms mature there are three flowers on each spray. In singles and anemones the size of the blooms will be a trifle smaller in size than when they are grown as one flower per stem.

Bunch disbudded spray pompons similar to the way used in bunching the regular grown pompons.

Varieties which may be grown as Disbudded Sprays are as follows:—

YELLOW

GOLDEN HERALD
YELLOW DOTY
YELLOW BEAUTY
HELIOS
SUSANNE MILLER
YELLOW ROLINDA
GOLDSMITH
GOLDEN JANE
BONNAFFON DELUXE

BRONZE

MASON'S BRONZE
APRICOT VALENCIA
BRONZE MASTERPIECE
BRONZE GOLDSMITH
BRONZE FREIDA
JANE

WHITE

SILVER BALL
GRACELAND
WHITE DOTY
RICHARD MANDEL
WHITE ANEMONE
SHASTA
LITTLE AMERICA
WHITE FREIDA
WHITE NORMA
LONG ISLAND BEAUTY
NEVADA
WHITE SUPREME

RED

EUROPA
CLARA HOLFORD

THE TITAN

RED MELBA
RED ROLINDA
CARNELIA

PINK

LILLIAN DOTY
QUEEN OF PINKS
THYRA
ENCHANTRESS
MASTERPIECE
FREIDA
NORMA
BEAUTIFUL LADY
VALENCIA
DARK PINK VALENCIA
DARK PINK SUPREME

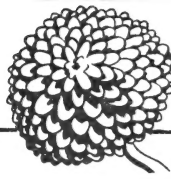


Goldsmith after disbudding



Goldsmith natural spray

Gloeckner



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